

SUP

ARTICLE 21

MOD

Section V. Reports of Infringements

(MOD) 1915 § 411. Infringements of the Constitution, Convention or Radio Regulations shall be reported to their respective administrations by the control organization, stations or inspectors detecting them. For this purpose they shall use forms similar to the specimen given in Appendix ~~22~~S9.

NOC 1916  
and  
1917  
1918  
to  
1942 NOT allocated.

SUP

ARTICLE 22

MOD

Section VI. Procedure in a Case of Harmful Interference

(MOD) 1943 § 414. It is essential that Members exercise the utmost goodwill and mutual assistance in the application of the provisions of Article 35 of the ~~Convention~~34 of the Constitution and of this Article~~Section~~ to the settlement of problems of harmful interference.

(MOD) 1944 § 215. In the settlement of these problems, due consideration shall be given to all factors involved, including the relevant technical and operating factors, such as: adjustment of frequencies, characteristics of transmitting and receiving antennae, time sharing, change of channels within multichannel transmissions.

(MOD) 1947 § 516. For the purpose of this Article~~Section~~, the term "administration" may include the centralizing office designated by the administration, in accordance with No. 1875.

(MOD) 1798 § 417. Administrations shall cooperate in the detection and elimination of harmful interference, employing where appropriate the facilities described in Article 20~~S16~~ and the procedures detailed in Article ~~22~~this Section.

(MOD) 1946 § 418. Where practicable, and subject to agreement by administrations concerned, the case of harmful interference may be dealt with directly by their specially designated monitoring stations or by direct coordination between their operating organizations.

(MOD) 1958 § 4619. Full particulars relating to harmful interference shall, whenever possible, be given in the form indicated in Appendix ~~23~~S10.

- (MOD) 1957 § ~~1520~~. Recognizing that transmissions on the distress and safety frequencies (see Article ~~38S31~~ and Appendix ~~S13~~) require absolute international protection and that the elimination of harmful interference to such transmissions is imperative, administrations undertake to act immediately when their attention is drawn to any such harmful interference.
- (MOD) 1956 § ~~1421~~. In cases of harmful interference where rapid action is required, communications between administrations shall be transmitted by the quickest means available and, subject to prior authorisation by the administrations concerned in such cases, information may be exchanged directly between specially designated stations of the international monitoring system.
- (MOD) 1945 § ~~322~~. When a case of such harmful interference is reported by a receiving station, it shall give to the transmitting station whose service is being interfered with all possible information which will assist in determining the source and characteristics of the interference.
- (MOD) 1948 § ~~623~~. If a case of harmful interference so justifies, the administration having jurisdiction over the receiving station experiencing the interference shall inform the administration having jurisdiction over the transmitting station whose service is being interfered with, giving all possible information.
- (MOD) 1949 § ~~724~~. If further observations and measurements are necessary to determine the source and characteristics of and to establish the responsibility for the harmful interference, the administration having jurisdiction over the transmitting station whose service is being interfered with may seek the cooperation of other administrations, particularly of the administration having jurisdiction over the receiving station experiencing the interference, or of other organizations.
- (MOD) 1955 § ~~1325~~. When cases of harmful interference occur as a result of emissions from space stations, the administrations having jurisdiction over these interfering stations shall, upon request from the administration having jurisdiction over the station experiencing the interference, furnish current ephemeral data necessary to allow determination of the positions of the space stations when not otherwise known.
- (MOD) 1950 § ~~826~~. Having determined the source and characteristics of the harmful interference, the administration having jurisdiction over the transmitting station whose service is being interfered with shall inform the administration having jurisdiction over the interfering station, giving all useful information in order that this administration may take such steps as may be necessary to eliminate the interference.
- (MOD) 1954 § ~~4227~~. On being informed that a station over which it has jurisdiction is believed to have been the cause of harmful interference, an administration shall, as soon as possible, acknowledge receipt of that information by telegram. Such acknowledgement shall not constitute an acceptance of responsibility.

- (MOD) 1951 § 928. When a safety service suffers harmful interference the administration having jurisdiction over the receiving station experiencing the interference may also approach directly the administration having jurisdiction over the interfering station. The same procedure may also be followed in other cases with the prior approval of the administration having jurisdiction over the transmitting station whose service is being interfered with.
- (MOD) 1952 § 4029. An administration receiving a communication to the effect that one of its stations is causing harmful interference to a safety service shall promptly investigate the matter and take any necessary remedial action.
- (MOD) 1953 § 4430. When the service rendered by an earth station suffers harmful interference, the administration having jurisdiction over the receiving station experiencing such interference may also approach directly the administration having jurisdiction over the interfering station.
- (MOD) 1959 § 4731. If the harmful interference persists in spite of the action taken in accordance with the procedures outlined above, the administration having jurisdiction over the transmitting station whose service is being interfered with may address to the administration having jurisdiction over the interfering station a report of irregularity or infraction in accordance with the provisions of ~~Article 21~~ Section V.
- (MOD) 1960 § 4832. If there is a specialized international organization for a particular service, reports of irregularities and of infractions relating to harmful interference caused or suffered by stations in this service may be addressed to such organization at the same time as to the administration concerned.
- (MOD) 1961 § 4933. (1) If it is considered necessary, and particularly if the steps taken in accordance with the procedures described above have not produced satisfactory results, the administration concerned shall forward details of the case to the ~~International Frequency Registration Board~~ BoardBureau for its information.
- (MOD) 1962 (2) In such a case, the administration concerned may also request the ~~BoardBureau~~ to act in accordance with the provisions of ~~Sections VII and VIII of Article 12 and Sections VII and VIII of Article 13~~ Section I of Article S13; but it shall then supply the ~~BoardBureau~~ with the full facts of the case, including all the technical and operational details and copies of the correspondence.
- (MOD) 1963 § 2034. (1) In the case where an administration has difficulty in identifying a source of harmful interference and urgently wishes to seek the assistance of the ~~BoardBureau~~, in a case affecting an assignment selected by the ~~BoardBureau~~ in response to a request under No. ~~42485.8~~ of Article S11, it shall promptly inform the ~~BoardBureau~~.

- (MOD) 1964 (2) On receipt of this information, the ~~Board~~Bureau shall immediately request the cooperation of appropriate administrations or specially designated stations of the international monitoring system that may be able to help in identifying the source of harmful interference.
- (MOD) 1965 (3) The ~~Board~~Bureau shall consolidate all reports received in response to requests under No. 1964 and, using such other information as it has available, shall promptly attempt to identify the source of harmful interference.
- MOD 1966 (4) The ~~Board~~Bureau shall thereafter forward its conclusions and recommendations ~~by telegram~~ to the administration reporting the case of harmful interference. These shall also be forwarded ~~by telegram~~ to the administration believed to be responsible for the source of harmful interference, together with a request for prompt action.
- 1967  
to  
1991 NOT allocated.

(MOD) ARTICLE ~~20~~S16

NOC International Monitoring

- MOD 1872 § 1. To assist to the extent practicable in the implementation of these Regulations, in particular to help ensure efficient and economical use of the radio-frequency spectrum and to help in the prompt elimination of harmful interference, administrations agree to continue the development of monitoring facilities and, to the extent practicable, to cooperate in the continued development of the international monitoring system. taking into account the relevant ITU-R Recommendations.<sup>1</sup>

- ADD 1872.1 <sup>1</sup> Information on this subject is also provided in the ITU-R Handbook on Monitoring Stations.

Reasons: Add more emphasis to the primary source of information on this subject.

- NOC 1873
- NOC 1875
- SUP 1876

Reasons: See reasons under No. 1874bis.

- NOC 1877

MOD 1874 § 3. Administrations will, as far as they consider practicable, conduct such monitoring of ~~both a general and a specific nature as may be required~~requested of them by the International Frequency Registration Board or by other administrations or by the Bureau. In requesting monitoring observations, the Board and administrations and the Bureau should take into account the monitoring facilities set forth in the List of International Monitoring Stations (List VIII, ~~see Article 26~~), and should clearly specify both the purpose for which the observations are requested and the parameters of the requested monitoring work (including appropriate schedules). The results of such monitoring forwarded to other administrations may also be sent to the Board, if appropriate.

ADD 1874bis Administrative and procedural requirements for use and operation of the international monitoring system shall be in accordance with the provisions of ITU-R Recommendation (see Annex 20).

Reasons: General monitoring has proved to be of limited practical utility and cost-benefit; hence, emphasis is on organized monitoring under special programmes. Suppressed material from Article 20 is transferred to a new or revised ITU-R Recommendation, and is incorporated by reference by the new provision.

SUP 1878  
to  
1884

Reasons: Nos. 1882 and 1884 are not necessary in the operation of today's monitoring system and are therefore deleted. Other suppressed provisions are transferred to a new or modified ITU-R Recommendation.

(MOD) 1885 § 435. The ~~Board~~Bureau shall record the results supplied by the monitoring stations participating in the international monitoring system, and shall prepare periodically, for publication by the Secretary-General, summaries of the useful monitoring data received by it including a list of the stations contributing the data.

(MOD) 1886 § 446. When an administration, in supplying monitoring observations from one of its monitoring stations taking part in the international monitoring system, states to the ~~Board~~Bureau that a clearly identified emission is not in conformity with these Regulations, the ~~Board~~Bureau shall draw the attention of the administration concerned to those observations.

Reasons: Consequential to the decisions of APP-92.

1887  
to  
1914

NOT allocated.

## CHAPTER SV

MOD **Administrative Provisions ~~for stations~~**

(MOD) **ARTICLE ~~23~~S17**

NOC **Secrecy**

NOC 1992  
to  
1994  
1995  
to  
2019 NOT allocated.

(MOD) **ARTICLE ~~24~~S18**

NOC **Licences**

NOC 2020  
to  
2030  
2031  
to  
2054 NOT allocated.

(MOD) **ARTICLE ~~25~~S19**

NOC **Identification of Stations**

NOC **Section I. General Provisions**

NOC 2055  
and  
2056

(MOD) 2057 (2) Where practicable and in appropriate services, identification signals should be automatically transmitted in accordance with relevant GCIRITU-R Recommendations.

**NOC 2058  
to  
2068  
Mob-87**

**MOD 2069**  
**Mob-87**

**§ 3.** In transmissions carrying identification signals a station shall be identified by a call sign, by a maritime mobile service identity-in accordance with Appendix 43 or by other recognized means of identification which may be one or more of the following: name of station, location of station, operating agency, official registration mark, flight identification number, selective call number or signal, selective call identification number or signal, characteristic signal, characteristic of emission or other clearly distinguishing features readily recognized internationally.

**Reasons:** Consequential to deletion of Appendix 43 and transfer of relevant provisions to this Article.

**NOC 2069.1**  
**Mob-87**

**NOC 2070 to 2074**

(MOD) 2075

d) **any other form recommended by the CGIRRadiocommunication Sector.**

(MOD) 2076

**§ 6. To the extent possible the identification signal should be transmitted in accordance with relevant CCIRITU-R Recommendations.**

(MOD) 2077

**§ 7. Administrations should ensure that wherever practicable superimposed identification methods be employed in accordance with GCIRITU-R Recommendations.**

**NOC 2078 to 2081**

## NOC

MOD 2082

**§ 12. (1) All stations open to the international public correspondence service, all amateur stations, and other stations which are capable of causing harmful interference beyond the boundaries of the country to which they belong, shall have call signs from the international series allocated to each country as given in the Table of Allocation of International Call Sign Series in Appendix 42 published by the Secretary-General.**

**Reasons:** Consequential to the deletion of Appendices 42 and 43.

(MOD)	2083 Mob-87	(2) As the need arises, ship stations and ship earth stations to which the provisions of Chapter <del>XISIX</del> apply, and coast stations or coast earth stations capable of communicating with such ships, shall have assigned to them maritime mobile service identities in accordance with <u>Appendix 43</u> <u>Section VI of this Article</u> .
NOC	2084	
MOD	2085	§ 13. Should the available call sign series in <del>Appendix 42</del> be exhausted, new call sign series may be allocated according to the principles set out in Resolution 13 relating to the formation of call signs and the allocation of new international series.  <u>Reasons:</u> Consequential to the deletion of Appendices 42 and 43.
NOC	2086	
MOD	2087 Mob-87 (2149K)	§ 15. The Secretary-General shall be responsible for allocating maritime identification digits to countries <sup>1</sup> <del>not included in the Table of Maritime Identification Digits (see Appendix 43)</del> and shall regularly publish <u>information regarding allocated Maritime Identification Digits (MIDs)</u> .
MOD	2087A Mob-87 (2149K)	§ 15A. The Secretary-General shall be responsible for allocating additional maritime identification digits to countries <sup>1</sup> <u>within the limits specified,<sup>2</sup> provided that he is satisfied that the possibilities offered by the MIDs allocated to an administration will soon be exhausted despite judicious ship station identity assignment as outlined in Section VI and in conformity with the guidelines contained in the relevant ITU-R and ITU-T Recommendations.</u>
NOC	2087.1 Mob-87	
NOC	2087.2 2087A.1 Mob-83	<hr/> <sup>1</sup> The word "country" is used with the meaning attributed to it in No. 2246.
(ADD)	2087A.2 (2149K.1)	<hr/> <sup>2</sup> <u>In no circumstances may a country claim more MIDs than the total number of its ship stations shown in the ITU List of Ship Stations (List V) divided by 1000.</u>

- (ADD) 2087B  
(2149L) A single MID has been allocated initially to each country. A second MID should not be requested unless the MID first allocated is more than 80% exhausted in the basic category of three trailing zeros and the rate of assignments is such that 90% exhaustion is foreseen. The same criteria should be applied to subsequent requests for MIDs.
- Reasons: Text related to the allocation of MIDs that was contained in Appendix 43 is placed in this section with similar provisions. Provisions from the appendix relating to assignment and formation of maritime mobile service identities is placed in Section VI.
- NOC 2088
- MOD 2089 § 17. (1) Each country shall choose the call signs and, if the selective calling system used is in accordance with Appendix ~~39~~[Annex AP 39], the ship station selective call number and the coast station identification numbers of its stations from the international series allocated or supplied to it; and shall, ~~in accordance with Article 26,~~ notify this information to the Secretary-General together with the information which is to appear in Lists I, II, IV, V, VI and VIII A. These notifications do not include call signs assigned to amateur and experimental stations.
- Reasons: Consequential to changes in Article 26.
- NOC 2090  
to  
2148
- NOC **Section VI. Maritime Mobile Service Identities in the Maritime Mobile Service and the Maritime Mobile-Satellite Service**  
**(See Note by the Secretariat)**
- ADD 2148A A. General
- MOD 2149  
Mob-87 § 37. When a station<sup>1</sup>, in the maritime mobile service or the maritime mobile-satellite service is required to use maritime mobile service identities, the responsible administration shall assign the identity to the station in accordance with the provisions described in Appendix ~~43~~Nos. 2149A to 2149AD, taking into consideration in accordance with relevant CCIR-ITU-R and CCITT-ITU-T Recommendations.
- (ADD) 2149.1 1. In this Section a reference to a ship station or a coast station may include the respective earth stations.
- (ADD) 2149A Maritime mobile service identities are formed of a series of nine digits which are transmitted over the radio path in order to uniquely identify ship stations, ship earth stations, coast stations, coast earth stations and group calls.

**Note by the Secretariat** - Provisions 2149.1 to 2149AD are taken from Appendix 43 and numbered in continuous sequence.

SUP	2149B	<del>Ship station identities shall be in accordance with relevant CCIR and CCITT Recommendations.</del>
(ADD)	2149C	These identities are formed in such a way that the identity or part thereof can be used by telephone and telex subscribers connected to the general telecommunications network principally to call ships automatically in the shore-to-ship direction.
(ADD)	2149D	There are four kinds of maritime mobile service identities:
(ADD)	2149E	i) ship station identities;
(ADD)	2149F	ii) group ship station call identities
(ADD)	2149G	iii) coast station identities;
(ADD)	2149H	iv) group coast station call identities.
(ADD)	2149I	In this Section, the word "country" is used with the meaning attributed to it in No. 2246 of the Radio Regulations.
(ADD)	2149J	B. Maritime Identification Digits (MID)
SUP	2149K	<del>Table 1 gives Maritime Identification Digits (MID) allocated to each country. In accordance with No. 2087, the Secretary General is responsible for allocating Maritime Identification Digits to countries not included in this table. No. 2087A authorizes the Secretary General to allocate additional MIDs to countries in accordance with this appendix within the limits specified,<sup>1</sup> provided that he is satisfied that the possibilities offered by the MIDs allocated to an administration will soon be exhausted despite judicious ship station identity assignment as outlined in 3.1 below and in conformity with the guidelines contained in the relevant ITU-R and ITU-T Recommendations.</del>
SUP*	2149K.1	<sup>1</sup> In no circumstances may a country claim more MIDs than the total number of its ships shown in the ITU List of Ship Stations (List V) divided by 1 000.
SUP*	2149L	<del>A single MID has been allocated to each country. A second MID should not be requested unless the MID first allocated is more than 80% exhausted in the basic category of three trailing zeros and the rate of assignments is such that 90% exhaustion is foreseen. The same criteria should be applied to subsequent requests for MIDs.</del>
(MOD)	2149M	These <u>guidelines provisions</u> do not require an administration to assign numerical identities until it determines that such identities are necessary. They do not concern the assignment of ship station identities without trailing zeros, since it is assumed that there is enough capacity inherent in the system to provide for the assignment of such identities to all ship stations which an administration may wish to identify in this manner.

(ADD)	2149N	C. Ship Station Identities
(ADD)	2149O	Administrations should:
(ADD)	2149P	a) follow the guidelines contained in the relevant ITU-R and ITU-T Recommendations for the assignment of ship station identities;
(ADD)	2149Q	b) make optimum use of the possibilities of forming identities from the single MID allocated to them;
(ADD)	2149R	c) take particular care in assigning ship station identities with six significant digits (three-trailing-zero identities), which should be assigned only to ship stations which can reasonably be expected to require such an identity for automatic access on a world-wide basis for public switched networks;
(ADD)	2149S	d) assign one-trailing-zero or two-trailing-zero identities to vessels when they require automatic access only on a national or regional level, as defined in the relevant ITU-T Recommendations;
(ADD)	2149T	e) assign ship station identities without trailing zeros to all other vessels requiring a numerical identification.
(ADD)	2149U	The 9-digit code constituting a ship station identity is formed as follows:
		$M_1I_2D_3X_4X_5X_6X_7X_8X_9$
		wherein
		$M_1I_2D_3$
		represent the Maritime Identification Digits and X is any figure from 0 to 9.
(ADD)	2149V	D. Group Ship Station Call Identities
(ADD)	2149W	Group ship station call identities for calling simultaneously more than one ship are formed as follows:
		$0_1M_2I_3D_4X_5X_6X_7X_8X_9$
		where the first figure is zero and X is any figure from 0 to 9.
(ADD)	2149X	The particular MID represents only the country assigning the group ship station call identity and so does not prevent group calls to fleets containing more than one ship nationality.
(ADD)	2149Y	E. Coast Station Identities
(ADD)	2149Z	Coast station identities are formed as follows:
		$0_10_2M_3I_4D_5X_6X_7X_8X_9$
		where the first two figures are zeros and X is any figure from 0 to 9.
(ADD)	2149AA	The MID reflects the country in which the coast station or coast earth station is located.

**F. Group Coast Station Call Identities**

**(ADD) 2149AB**  
**(ADD) 2149AC**

Group coast station call identities for calling simultaneously more than one coast station are formed as a subset of coast station identities, as follows:

$0_1 0_2 M_3 I_4 D_5 X_6 X_7 X_8 X_9$

where the first two figures are zeros and X is any figure from 0 to 9.

**(ADD) 2149AD**

The particular MID represents only the country assigning the group coast station call identity. The identity may be assigned to stations of one administration which are located in only one geographical region as indicated in the relevant ITU-T Recommendation.

**NOC 2150**  
**to**  
**2154**  
**2155**  
**to**  
**2179**

NOT allocated.

(MOD)		ARTICLE <del>26</del> <u>S20</u>
NOC		Service Documents
SUP		<del>Section I. Titles, Contents and Publication of Service Documents</del>
NOC	2180	
NOC	2181	§ 2. List I. The International Frequency List.
MOD	2182	(1) This list shall <del>be based on information prepared by the IFRB</del> and shall contain:
NOC	2183	a) particulars of frequency assignments recorded in the Master International Frequency Register;
NOC	2184	b) the frequencies (e.g. 500 kHz or 2 182 kHz) prescribed by these Regulations for common use by certain services;
(MOD)	2185 Mob-87	c) the allotments in the Allotment Plans included in Appendices <u>S25</u> (see No. 4212), <u>S26</u> and <u>S27 Aer2</u> .
SUP		<del>*Note by the General Secretariat: See No. 5189.</del>
SUP	2186 to 2196	
SUP	2197	<del>List II. List of Fixed Stations Operating International Circuits.</del>
SUP	2198 to 2200	
NOC	2201	List IV. List of Coast Stations.
SUP	2201A to 2203	
NOC	2204	List V. List of Ship Stations.
SUP	2205 to 2211	
NOC	2212	List VI. List of Radiodetermination and Special Service Stations.
SUP	2213 and 2214	

NOC	2215 Mob-87	List VII A. List of Call Signs and Numerical Identities of Stations Used by the Maritime Mobile and Maritime Mobile-Satellite Services.
SUP	2216 Mob-87 to 2218 Mob-87	
NOC	2219 Mob-87	List VII B. Alphabetical List of Call Signs of Stations Other than Amateur Stations, Experimental Stations and Stations of the Maritime Mobile Service.
SUP	2220 Mob-87 and 2221 Mob-87	
NOC	2222	List VIII. List of International Monitoring Stations.
SUP	2223 and 2224	
NOC	2225	List VIII A. List of Stations in the Space Radiocommunication Services and in the Radio Astronomy Service.
SUP	2226 and 2227	
SUP	2228 Mob-87	<del>Map of Coast Stations Open to Public Correspondence.</del>
SUP	2229	<del>Chart in Colours Showing Frequency Allocations.</del>
NOC	2230	Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services.
SUP	2231 to 2236	
ADD	2236A	<p>§ 11. <u>The form, the content and the periodicity of each publication shall be decided by the Bureau in consultation with administrations.</u></p> <p><u>Reasons:</u></p> <ol style="list-style-type: none"><li>1) Obsolete publications are deleted.</li><li>2) In view of ADD 2236A, the description in the RR of form, content and periodicity of each publication is no longer necessary.</li></ol>

SUP

**~~Section II. Preparation and Amendment of Service Documents~~**

MOD

2237

~~§ 14.12. (1) The Secretary-General shall publish the amendments to the documents listed in Section I of this Article. Administrations shall take all appropriate measures to notify the Secretary-General~~Bureau ~~immediately as changes in operational information contained in the Lists IV, V and VI are made, in view of the importance of this information particularly with regard to safety. In the case of other documents administrations shall communicate the changes in the information contained in them as soon as possible.~~ (Rest of the text of No. 2237 is deleted).

Reasons: Consequential to ADD 2236A above.

SUP

2238

to

2245

NOC

2246

2247

to

2500

NOT allocated.

## CHAPTER SVI

MOD	Provisions Relating to Groups or Services and to Specific Services and Stations*
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**MOD** For provisions governing the mobile services and the special services related to safety, see:

**Special services related to safety (non-GMDSS):**

**Special services related to safety**  
**(GMDSS):**

**Aeronautical mobile service and  
aeronautical mobile-satellite service: Chapter ~~XSVIII~~**

**Maritime mobile service and maritime mobile-satellite service: Chapter XIX**

**Land mobile service and land mobile satellite service:** Chapter XII

(MOD) ARTICLE 27S21\*\*

**MOD                      Terrestrial Radiocommunication Services Sharing  
Frequency Bands with and Space Radiocommunication  
Services Sharing Frequency Bands Above 1 GHz**

**\*\* (Note by VGE - It is proposed to place the simplified Articles 27-29 immediately after Article 8, the Table of Frequency Allocations, to emphasize the close relationship of these sharing criteria to the allocations.)**

**NOC** **Section I. Choice of Sites and Frequencies**

MOD	2501	<p>§ 1. Sites and frequencies for terrestrial stations <u>and earth stations</u>, operating in frequency bands shared with equal rights <u>between terrestrial radiocommunication and space radiocommunication services</u>, shall be selected having regard to the relevant <u>CCIRITU-R Recommendations</u> with respect to geographical separation from earth stations <u>and terrestrial stations respectively</u>.</p>
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**Reasons:** To combine provisions of Articles 27 and 28 which are similar.

MOD 2502 § 2. (1) As far as practicable, sites for transmitting<sup>1</sup> stations, in the fixed or mobile service, employing maximum values of equivalent isotropically radiated power (e.i.r.p.) exceeding +35-dBWthe values given in the Table [AR27] below in the frequency bands between 1 GHz and 10 GHz indicated, should be selected so that the direction of maximum radiation of any antenna will be at least 2° away separated from the geostationary-satellite orbit by at least the angle in degrees shown in the Table, taking into account the effect of atmospheric refraction<sup>2</sup>.

TABLE [AR27]

Frequency band (in-GHz)	E.i.r.p. value (in-dBW) (also see 2502 and 2506)	Minimum separation angle with respect to geostationary-satellite orbit (GSO) (in-degrees)
1 - 10	+35	2
10 - 15	+45	1.5
25.25 - 27.5	+24 (in any 1 MHz band) <sup>3</sup>	1.5
Other bands above 15 GHz	<u>+55<sup>4</sup></u>	<u>No limit<sup>4</sup></u>

NOC 2502.1 <sup>1</sup> For their own protection receiving stations in the fixed or mobile service operating in bands shared with space radiocommunication services (space-to-Earth) should also avoid directing their antennae towards the geostationary-satellite orbit if their sensitivity is sufficiently high that interference from space station transmissions may be significant.

(MOD) 2502.2 <sup>2</sup> Information on this subject is given in the most recent version of CCIR ITU-R Report 393.

MOD ~~2504A.1~~  
~~WARC-92~~  
2502.3 <sup>34</sup> ~~The provisions of No. 2504A~~This value shall apply until such time as the CCIR has made a an ITU-R Recommendation has been adopted (see No. 2502.4 below) on the e.i.r.p. density limits which should apply in the band.

MOD ~~2504.1~~  
2502.4 <sup>44</sup> ~~The provisions of No. 2504 shall apply until such time as the CCIR has made~~This value shall apply in the frequency bands above 15 GHz specified in Table [AR27bis] until an ITU-R Recommendation has been adopted and approved by a competent WRC as to the need for restrictions in frequency bands specified in No. 2511 on e.i.r.p. and angular separation from geostationary-satellite orbit, at which time all systems introduced after 1 January 1982 should as far as practicable meet any such restriction.

SUP\* 2503

SUP\* 2503.1

SUP\* 2503.2  
 SUP\* 2504  
 SUP\* 2504A  
 WARC-92

Reasons: Nos. 2503, 2503.1, 2503.2, 2504 and 2504A are combined into one single provision associated with the Table as shown.

MOD **Section II. Power Limits for Terrestrial Stations**

NOC 2505

MOD 2506

(2) Where compliance with No. 2502 for frequency bands between 1 GHz and 10 GHz is impracticable the maximum equivalent isotropically radiated power (e.i.r.p.) of a station in the fixed or mobile service shall not exceed:

+47 dBW in any direction within 0.5° of the geostationary-satellite orbit; or

+47 dBW to +55 dBW, on a linear decibel scale (8 dB per degree), in any direction between 0.5° and 1.5° of the geostationary-satellite orbit, taking into account the effect of atmospheric refraction<sup>1</sup>.

(MOD) 2506.1

<sup>1</sup> Information on this subject is given in the most recent version of CCIRITU-R Report 393.

MOD 2507

(3) The power delivered by a transmitter to the antenna of a station in the fixed or mobile service shall not exceed: +13 dBW in frequency bands between 1 GHz and 10 GHz, or +10 dBW in frequency bands above 10 GHz.

SUP\* 2508

Reasons: 2508 combined with 2507.

MOD 2509  
 WARC-92

~~(5)~~(4) The limits given in Nos. 2502, 2505, 2506 and 2507 apply, where applicable, to the services and frequency bands indicated in Table [AR27bis] below for reception by space stations where the frequency bands are shared with equal rights with the fixed or mobile service.

TABLE [AR27bis]

Frequency Band	Service	Specified in Nos.
1 610 - 1 645.5 MHz (No. 730) 1 646.5 - 1 660 MHz (No. 730) 1 675 - 1 690 MHz (Region 2) 1 690 - 1 700 MHz (Region 2 countries mentioned in No. 740) 1 700 - 1 710 MHz (Region 2) 1 970 - 1 980 MHz (Region 2) 1 980 - 2 010 MHz 2 025 - 2 110 MHz 2 200 - 2 290 MHz 2 655 - 2 670 MHz <sup>1</sup> (Regions 2 and 3) 2 670 - 2 690 MHz 5 725 - 5 755 MHz <sup>1</sup> (Region 1 countries mentioned in Nos. 803 and 805) 5 755 - 5 850 MHz <sup>1</sup> (Region 1 countries mentioned in Nos. 803, 805 and 807) 5 850 - 7 075 MHz 7 900 - 8 400 MHz	Fixed-Satellite Meteorological-Satellite Space Research Space Operation Earth Exploration-Satellite Mobile-satellite	Nos. 2502, 2505, 2506 and 2507
10.7 - 11.7 GHz <sup>1</sup> (Region 1) 12.5 - 12.75 GHz <sup>1</sup> (Nos. 848 and 850) 12.7 - 12.75 GHz <sup>1</sup> (Region 2) 12.75 - 13.25 GHz 14.0 - 14.25 GHz (No. 857) 14.25 - 14.3 GHz (Nos. 857, 860 and 861) 14.3 - 14.4 GHz <sup>1</sup> (Regions 1 and 3) 14.4 - 14.5 GHz 14.5 - 14.8 GHz	Fixed-Satellite	Nos. 2502, 2505 and 2507
17.7 - 18.4 GHz 24.45 - 24.75 GHz 24.75 - 25.25 GHz (Region 3) 25.25 - 29.5 GHz	Fixed-Satellite Inter-Satellite	Nos. 2502, 2505 and 2507

(MOD) 2509.1

<sup>1</sup> The equality of right to operate when a band of frequencies is allocated in different Regions to different services of the same category is established in No. 346. Therefore any limits concerning inter-Regional interference which may appear in CCIRITU-R Recommendations should, as far as practicable, be observed by administrations.

NOC 2509A  
WARC-92

SUP 2510  
Orb-88

SUP 2510.1

NOC 2510.2

SUP 2511  
WARC-92

Reasons: To simplify Articles 27 and 28, and to assist the reader in readily determining the power limits applying to fixed and mobile stations in bands shared with space services. The information is shown in Table [AR27bis] above. No. 2510.1 is proposed to be suppressed as it repeats the text of No. 2509.1.

NOC 2511.1  
Orb-88  
and  
2511.2  
WARC-92

2512  
to  
2538

NOT allocated.

SUP ARTICLE 28

SUP ~~Space Radiocommunication Services Sharing Frequency Bands  
with Terrestrial Radiocommunication Services Above 1 GHz~~

SUP ~~Section I. Choice of Sites and Frequencies~~

SUP\* 2539

Reasons: 2539 combined with 2501.

MOD

**Section IIII. Power Limits for Earth Stations**

SUP\* 2540

Reasons: Text included in title of Section.

MOD 2541

§4. (2)(1) The equivalent isotropically radiated power (e.i.r.p.) transmitted in any direction towards the horizon by an earth station shall not exceed the following limits except as provided in No. 2544 or 2546:

a) in frequency bands between 1 GHz and 15 GHz

+40 dBW in any 4 kHz band for  $\theta \leq 0^\circ$

+40 + 3  $\theta$  dBW in any 4 kHz band for  $0^\circ < \theta \leq 5^\circ$ ; and

~~in frequency bands between 1 GHz and 15 GHz, or~~

b) in frequency bands above 15 GHz

+64 dBW in any 1 MHz band for  $\theta \leq 0^\circ$

+64 + 3  $\theta$  dBW in any 1 MHz band for  $0^\circ < \theta \leq 5^\circ$ ; and

~~in frequency bands above 15 GHz, where  $\theta$  is the angle of elevation of the horizon viewed from the centre of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.~~

SUP\* 2542

Reasons: Combined with 2541.

NOC 2543

MOD 2544

(5)(4) As an exception to the limits given in No. 2541, the equivalent isotropically radiated power (e.i.r.p.) towards the horizon for an earth station in the space research service (deep space) shall not exceed +55 dBW in any 4 kHz band; in frequency bands between 1 GHz and 15 GHz, or +79 dBW in any 1 MHz band in frequency bands above 15 GHz.

SUP\* 2545

Reasons: Combined with 2544.

- MOD 2546 ~~(7)~~(5) The limits given in Nos. 2541, ~~2542, and 2544 and 2545~~, as applicable, may be exceeded by not more than 10 dB. However, when the resulting coordination area extends into the territory of another country, such increase shall be subject to agreement by the administration of that country.
- MOD 2547 (8)(6) The limits given in No. 2541 apply, where applicable, to the services and frequency bands indicated in Table [AR27ter] below for transmission by earth stations where the frequency bands are shared with equal rights with the fixed or mobile service.

TABLE [AR27ter]

Frequency band		Services
5 670 - 5 725 MHz	(for the countries mentioned in No. 804 with respect to the countries mentioned in Nos. 803 and 805)	Fixed-Satellite Earth Exploration-Satellite Meteorological-Satellite Mobile-Satellite Space Research
5 725 - 5 755 MHz <sup>1</sup>	(for Region 1 with respect to the countries mentioned in Nos. 803 and 805)	
5 755 - 5 850 MHz <sup>1</sup>	(for Region 1 with respect to the countries mentioned in Nos. 803, 805 and 807)	
5 850 - 7 075 MHz		
7 900 - 8 400 MHz		
10.7 - 11.7 GHz <sup>1</sup>	(for Region 1)	
12.5 - 12.75 GHz <sup>1</sup>	(for Region 1 with respect to the countries mentioned in No. 848)	
12.7 - 12.75 GHz <sup>1</sup>	(for Region 2)	
12.75 - 13.25 GHz		
14.0 - 14.25 GHz	(with respect to the countries mentioned in No. 857)	
14.25 - 14.3 GHz	(with respect to the countries mentioned in Nos. 857, 860 and 861)	
14.3 - 14.4 GHz <sup>1</sup>	(for Regions 1 and 3)	
14.4 - 14.8 GHz		
17.7 - 18.1 GHz		Fixed-Satellite Earth Exploration-Satellite Mobile-Satellite Space Research
27.0 - 27.5 GHz <sup>1</sup>	(for Regions 2 and 3)	
27.5 - 29.5 GHz		
31.0 - 31.3 GHz	(for the countries mentioned in No. 885)	
34.2 - 35.2 GHz	(for the countries mentioned in Nos. 895 and 896 with respect to the countries mentioned in No. 894)	

(MOD) 2547.1 1 The equality of right to operate when a band of frequencies is allocated in different Regions to different services of the same category is established in No. 346. Therefore any limits concerning inter-Regional interference which may appear in CCIRITU-R Recommendations should, as far as practicable, be observed by administrations.

SUP\* 2548

SUP\* 2548.1

Reasons: Text is included in the Table [AR27ter.].

(MOD) 2548A Mob-87 ~~(40)~~(7) The equivalent isotropically radiated power (e.i.r.p.) transmitted in any direction by an earth station in the radiodetermination-satellite service in the band 1 610 - 1 626.5 MHz shall not exceed -3 dBW in any 4 kHz band.

MOD

#### Section ~~III~~IV. Minimum Angle of Elevation of Earth Stations

SUP\* 2549

Reasons: Text included in title of Section.

NOC 2550  
and  
2551

#### (MOD) Section IVV. Limits of Power-Flux Density from Space Stations

ADD 2551bis §6. (1) The power-flux density at the Earth's surface produced by emissions from a space station, including emissions from a reflecting satellite, for all conditions and for all methods of modulation shall not exceed that limit given in Table [AR28] below. The limit relates to the power-flux density which would be obtained under assumed free-space propagation conditions and applies to transmission by space station of the service indicated where the frequency bands are shared on equal rights with the fixed or mobile service unless otherwise stated.

Reasons: Introductory text for the Table [AR28].

TABLE [AR28]

Frequency band	Service	Limit in dB(W/m <sup>2</sup> ) for angle of arrival above the horizontal plane			Reference bandwidth
		0° - 5°	5° - 25°	25° - 90°	
1 670 - 1 700 MHz	Earth Exploration- Satellite Service Meteorological-Satellite Service	-133 (value based on sharing with meteorological aids service)			1.5 MHz [2552-2555]
1 525 - 1 530 MHz <sup>1</sup> (R1, R3) 1 670 - 1 690 MHz <sup>5</sup> 1 690 - 1 700 MHz (No. 740, No. 741) 1 700 - 1 710 MHz 2 025 - 2 110 MHz 2 200 - 2 300 MHz	Meteorological-Satellite (S-E) Space Research (S-E) (S-S) Space Operation (S-E) (S-S) Earth Exploration-Satellite (S-E) (S-S)	-154 <sup>3</sup> [2560]	-154 + 0.5 (δ-5) <sup>3</sup> [2560]	-144 <sup>3</sup> [2560]	4 kHz [2556-2559]
2 500 - 2 690 MHz 2 520 - 2 670 MHz 2 500 - 2 516.5 MHz (No. 754A)	Fixed-satellite Broadcasting-satellite Radiodetermination-satellite	-152 <sup>3</sup> [2564]	-152 + 0.75 (δ-5) <sup>3</sup> [2564]	-137 <sup>3</sup> [2564]	4 kHz [2561-2563]
3 400 - 4 200 MHz 4 500 - 4 800 MHz 5 670 - 5 725 MHz (No. 803 and No. 806) 7 250 - 7 750 MHz	Fixed-Satellite (S-E) Meteorological-Satellite (S-E) Mobile-Satellite Space Research	-152 [2565-2568]	-152 + 0.5 (δ-5) [2565-2568]	-142 [2565-2568]	4 kHz [2565-2568]
8 025 - 8 500 MHz 10.7 - 11.7 GHz	Earth Exploration-Satellite (S-E) Space Research (S-E) Fixed-Satellite (S-E)	-150 [2569-2572]	-150 + 0.5 (δ-5) [2569-2572]	-140 [2569-2572]	4 kHz [2569-2572]
12.2 - 12.5 GHz <sup>1</sup> (R3) 12.5 - 12.75 GHz <sup>2</sup> (R3 and R1 countries in Nos. 848 and 850)	Fixed-Satellite (S-E)	-148 [2573-2576]	-148 + 0.5 (δ-5) [2573-2576]	-138 [2573-2576]	4 kHz [2573-2576]
17.7 - 19.7 GHz <sup>1</sup> 22.55 - 23.55 GHz 24.45 - 24.75 GHz 25.25 - 27.5 GHz	Fixed-Satellite (S-E) Earth Exploration-Satellite (S-E) Meteorological-Satellite (S-E) Inter-Satellite	-115 [2577-2580]	-115 + 0.5 (δ-5) [2577-2580]	-105 [2577-2580]	1 MHz [2577-2580]
31.0 - 31.3 GHz 34.7 - 35.2 GHz (S-E transmissions mentioned in No. 896 on the territories of countries mentioned in No. 894) 37.0 - 40.5 GHz	Fixed-Satellite Mobile-Satellite Space Research	-115 <sup>4</sup> [2582.1]	-115 + 0.5 (δ-5) <sup>4</sup> [2582.1]	-105 <sup>4</sup> [2582.1]	1 MHz [2581-2584]

## Notes

**2551bis.1** - <sup>1</sup>The equality of right to operate when a band of frequencies is allocated in different Regions to different services of the same category is established in No. 346. Therefore any limits concerning inter-Regional interference which may appear in ITU-R Recommendations should, as far as practicable, be observed by administrations. [No. 2559.1 and No. 2576.1]

**2551bis.2** - <sup>2</sup>See 2551.bis.1 and Resolution 34. [No. 2576.2]

**2551bis.3** - <sup>3</sup>These power flux-density values are derived on the basis of protecting the fixed service using line-of-sight techniques. Where a fixed service using tropospheric scatter operates in the bands listed in the first column and where there is insufficient frequency separation, there must be sufficient angular separation between the direction to the space station and the direction of maximum radiation of the antenna of the receiving station of the fixed service using tropospheric scatter to ensure that the interference power at the receiver input of the station of the fixed service does not exceed -168 dBW in any 4 kHz band. [Nos. 2560 and 2564]

**2551bis.4** - <sup>4</sup>The values given in this box shall apply until such time as the ITU-R has made a Recommendation as to the values of power-flux-density limits which should apply in the frequency band specified [in the first column at the left], at which time all systems shall meet those power-flux-density limits recommended by the Radiocommunication Assembly and endorsed by a competent world administrative radio conference. [No. 2582.1]

**2551bis.5** - <sup>5</sup>The values are applicable where this band is shared with equal rights with the meteorological aids service.

**SUP\***      **2552**  
              **to**  
              **2584**

Reasons: Nos. 2552-2584 and associated footnotes replaced by Table [AR28].

**MOD**      **2585**

~~(9)(2)~~ The limits given in Nos. ~~2553, 2557, 2562, 2566, 2570, 2574, 2578, 2582 and 2582.1~~ Table [AR28] may be exceeded on the territory of any country the administration of which has so agreed.

Reasons: Consequential to the changes made.

**2586**  
**to**  
**2611**

NOT allocated.